



BN-MPTB  
April 2008

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# MEDIUM PROFILE UNIT COOLERS

## Technical Guide

Models BMA | Air Defrost • BME/BML | Electric Defrost • BMG/BMF | Hot Gas Defrost



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We have made a commitment to customer needs, innovation and environmental stewardship and have dedicated ourselves to delivering energy-efficient choices. PSC and EC motors will reduce costs, improve the bottom line and enhance equipment performance and service life.

## Choose the most energy-efficient motor available for evaporators.



The EC motor is an Energy Solutions® option on new Bohn Medium Profile evaporators. Available on all new equipment or as an easy-to-install, drop-in replacement aftermarket part from InterLink™ Commercial Refrigeration Parts. Because they're a drop-in replacement for existing PSC motors, installation is quick and easy. It's a **high impact, quick payback solution** for reducing costs and achieving green initiatives **without replacing the entire system.**

EC motors by InterLink are **up to 75% efficient** - that's a **30-35% increase over permanent-split capacitor (PSC) motors.** With all of this added efficiency, you can count on more **energy savings and lower operational costs** while taking a step in the right direction toward conserving our planet's resources.

To learn more about EC motors, visit [www.interlinkparts.com/ec](http://www.interlinkparts.com/ec).

## Nomenclature

BM	A	130	B	A
Model Series	Model Type	Capacity	Electrical Code	Design Revision
Bohn Medium Profile Unit Coolers	A = Air defrost E = Electric defrost, 6 FPI L = Electric defrost, 4 FPI G = Hot gas defrost, 6 FPI F = Hot gas defrost, 4 FPI	# BTUH x 100	A = 115/1/60 B = 208-230/1/60 C = 208-230/3/60 D = 460/3/60 M = 460/1/60 E = 575/3/60 L = 575/1/60 N = 110/1/50 Q = 220/1/50 R = 380/1/50 V = 380/3/50 AE = 115/1/60 (EC) BE = 208-230/1/60 (EC) CE = 208-230/3/60 (EC)	

## Features & Benefits

### Cabinet

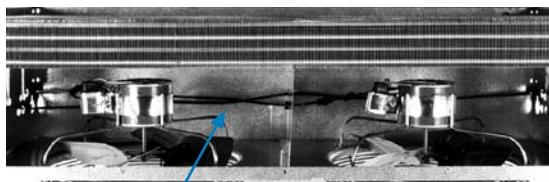
- Schrader valve provided for suction pressure measurement
- External equalizer connection
- Heavy-gauge textured aluminum cabinet
- All electrical components factory wired to terminal board and identified, making it easy to field wire the unit
- Sweat connections to reduce potential for leaks
- Internal panels are isolated for quiet operation
- Liquid line solenoid wire harness is factory-installed for quick installation

### Drain Pan

- Front hinged drain pan for easy access
- Large diameter drain fitting (3/4" ID)

### Motors

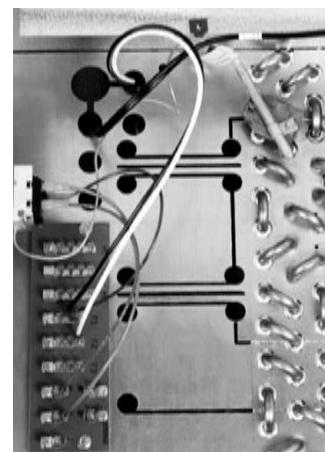
- Motors plug into wiring harness for easier servicing
- Single phase EC motors available factory-installed or as a drop-in replacement through InterLink™ Commercial Refrigeration Parts in 115 and 208-230 voltages
- Thermally protected, lifetime-lubricated single phase PSC motors



Factory-installed liquid line solenoid wiring harness for faster installation

### Coil

- Patented Thermo-Flex™ coil design allows the coil to "flex" during periods of defrost resulting in expansion of the coil surface. By eliminating the possibility of wear at critical stress areas, the integrity and longevity of the unit are dramatically increased (Patent Number 5,584,340)
- Coil heater slots have been enlarged for easier installation and replacement
- Electric defrost models have fixed defrost termination / fan delay and heater limit thermostats
- Reliable nickel steel alloy defrost heater elements
- Heaters are coil face mounted for easy access



Innovative Thermo-Flex™ coil

### Options

- Totally enclosed single phase PSC motors available as an option for 208-230 and 460 voltages
- Unit Configurations: mounted components, pre-assembled, pre-charged and Beacon II™
  - Units available with mounted TXV and mounted TXV / solenoid valve
  - Pre-assembled units come with mounted TXV, liquid line solenoid valve and room thermostat
  - Pre-charged units come with mounted TXV, liquid line solenoid valve, room thermostat and quick connect fittings (limited availability)
  - Room thermostat option mounted on the back of unit
  - Beacon II units come with electronic expansion valves, pressure transducer, temperature sensors and Beacon control board
- Most models available with glycol circuiting (see glycol product brochure)
- Units available with stainless steel housing and drain pan
- Units available with copper fins. Air defrost units also available with polyester coated fins or various coil coatings options
- Units available with insulated drain pan
- Ship-loose air sock collar available
- Wire fan guards for air diffusion
- Adjustable defrost termination / fan delay thermostat

**Bohn offers a five-year limited guarantee against leaks at tube sheets and center supports for all medium profile unit coolers**

## Performance Data

### Model BMA Air Defrost | 60 Hz

Model	Capacity		Fan Data			Air Throw*†					
	10°F TD 25°F SST	6°C TD - 4°C SST	No.	CFM	m³/h	Diameter		Extended (Standard)		Diffused (Optional)	
	BTUH	Watts				in.	mm	ft.	m	ft.	m
BMA130	<b>13,000</b>	3,810	1	<b>2,300</b>	3,910	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
BMA155	<b>15,500</b>	4,540	1	<b>2,200</b>	3,740	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
BMA245	<b>24,500</b>	7,180	2	<b>4,600</b>	7,820	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
BMA300	<b>30,000</b>	8,790	2	<b>4,400</b>	7,480	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
BMA365	<b>36,500</b>	10,690	3	<b>6,900</b>	11,730	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
BMA450	<b>45,000</b>	13,180	3	<b>6,600</b>	11,220	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
BMA510	<b>51,000</b>	14,940	4	<b>9,200</b>	15,640	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
BMA600	<b>60,000</b>	17,570	4	<b>8,800</b>	14,960	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
BMA710	<b>71,000</b>	20,790	5	<b>10,500</b>	17,850	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15

### Model BMA Air Defrost | 50 Hz‡

Model	Capacity		Fan Data			Air Throw*†					
	10°F TD 25°F SST	6°C TD - 4°C SST	No.	CFM	m³/h	Diameter		Extended (Standard)		Diffused (Optional)	
	BTUH	Watts				in.	mm	ft.	m	ft.	m
BMA130	<b>11,960</b>	3,500	1	<b>2,070</b>	3,520	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
BMA155	<b>14,260</b>	4,180	1	<b>1,980</b>	3,370	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
BMA245	<b>22,540</b>	6,600	2	<b>4,140</b>	7,040	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
BMA300	<b>27,600</b>	8,080	2	<b>3,960</b>	6,730	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
BMA365	<b>33,580</b>	9,840	3	<b>6,210</b>	10,560	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
BMA450	<b>41,400</b>	12,130	3	<b>5,940</b>	10,100	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
BMA510	<b>46,920</b>	13,740	4	<b>8,280</b>	14,080	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
BMA600	<b>55,200</b>	16,170	4	<b>7,920</b>	13,460	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
BMA710	<b>65,320</b>	19,130	5	<b>9,450</b>	16,070	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5

\* Standard molded fan guards allow for extended air throw; optional wire guards promote air diffusion

† Air throw data based on 12-ft. high ceilings with no obstructions where velocity drops to 50 FPM

‡ For EC motors, use 60 Hz capacity and airflow values (Units with EC motors operating at 50 Hz will not see a reduction in performance due to the electronic control of the motor)

## Specifications

### Model BMA Air Defrost | 60 Hz

Model	HP*	PSC Motor								EC Motor			
		115/1/60		208-230/1/60		460/1/60		575/1/60		115/1/60		208-230/1/60	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
BMA130	1/4	<b>4.0</b>	300	<b>1.8</b>	305	<b>1.0</b>	305	<b>0.7</b>	310	<b>2.8</b>	210	<b>1.4</b>	205
BMA155	1/4	<b>4.0</b>	300	<b>1.8</b>	305	<b>1.0</b>	305	<b>0.7</b>	310	<b>2.8</b>	210	<b>1.4</b>	205
BMA245	1/4	<b>8.0</b>	600	<b>3.6</b>	610	<b>2.0</b>	610	<b>1.4</b>	620	<b>5.6</b>	420	<b>2.8</b>	410
BMA300	1/4	<b>8.0</b>	600	<b>3.6</b>	610	<b>2.0</b>	610	<b>1.4</b>	620	<b>5.6</b>	420	<b>2.8</b>	410
BMA365	1/4	<b>12.0</b>	900	<b>5.4</b>	915	<b>3.0</b>	915	<b>2.1</b>	930	<b>8.4</b>	630	<b>4.2</b>	615
BMA450	1/4	<b>12.0</b>	900	<b>5.4</b>	915	<b>3.0</b>	915	<b>2.1</b>	930	<b>8.4</b>	630	<b>4.2</b>	615
BMA510	1/4	<b>16.0</b>	1,200	<b>7.2</b>	1,220	<b>4.0</b>	1,220	<b>2.8</b>	1,240	<b>11.2</b>	840	<b>5.6</b>	820
BMA600	1/4	<b>16.0</b>	1,200	<b>7.2</b>	1,220	<b>4.0</b>	1,220	<b>2.8</b>	1,240	<b>11.2</b>	840	<b>5.6</b>	820
BMA710	1/4	-	1,500	<b>9.0</b>	1,525	<b>5.0</b>	1,525	<b>3.5</b>	1,550	<b>14.0</b>	1,050	<b>7.0</b>	1,025

### Model BMA Air Defrost | 50 Hz

Model	HP	PSC Motor			EC Motor			
		110/1/50		220/1/50	380/1/50		110/1/50	
		Amps	Amps	Amps	Amps	Amps	Amps	
BMA130	1/4	4.0		1.8		1.0	2.8	1.4
BMA155	1/4	4.0		1.8		1.0	2.8	1.4
BMA245	1/4	8.0		3.6		2.0	5.6	2.8
BMA300	1/4	8.0		3.6		2.0	5.6	2.8
BMA365	1/4	12.0		5.4		3.0	8.4	4.2
BMA450	1/4	12.0		5.4		3.0	8.4	4.2
BMA510	1/4	16.0		7.2		4.0	11.2	5.6
BMA600	1/4	16.0		7.2		4.0	11.2	5.6
BMA710	1/4	-		9.0		5.0	14.0	7.0

\* 575/1/60 motors are 1/3 HP

## Performance Data

### Model BME/BML Electric Defrost | 60 Hz

Model	Capacity		Fan Data			Air Throw*†						
	10°F TD -20°F SST	6°C TD -29°C SST	No.	CFM	m³/h	Diameter		Extended (Std.)		Diffused (Opt.)		
	BTUH	Watts				in.	mm	ft.	m	ft.	m	
6 Fins Per Inch	BME101	<b>10,100</b>	2,960	1	<b>2,350</b>	4,000	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BME140	<b>14,000</b>	4,100	1	<b>2,250</b>	3,830	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BME190	<b>19,000</b>	5,570	2	<b>4,700</b>	7,990	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BME260	<b>26,000</b>	7,620	2	<b>4,500</b>	7,650	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BME310	<b>31,000</b>	9,080	3	<b>7,050</b>	11,990	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BME390	<b>39,000</b>	11,420	3	<b>6,750</b>	11,480	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BME430	<b>43,000</b>	12,590	4	<b>8,800</b>	14,960	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BME520	<b>52,000</b>	15,230	4	<b>8,400</b>	14,280	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BME620	<b>62,000</b>	18,160	5	<b>10,000</b>	17,000	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
4 Fins Per Inch	BML100	<b>10,000</b>	2,930	1	<b>2,325</b>	3,950	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BML165	<b>16,500</b>	4,830	2	<b>4,900</b>	8,330	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BML220	<b>22,000</b>	6,440	2	<b>4,650</b>	7,910	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BML250	<b>25,000</b>	7,320	3	<b>7,350</b>	12,500	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BML330	<b>33,000</b>	9,670	3	<b>6,975</b>	11,860	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BML370	<b>37,000</b>	10,840	4	<b>9,100</b>	15,470	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BML440	<b>44,000</b>	12,890	4	<b>8,700</b>	14,790	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BML530	<b>53,000</b>	15,520	5	<b>10,350</b>	17,600	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15

### Model BME/BML Electric Defrost | 50 Hz‡

Model	Capacity		Fan Data			Air Throw*†						
	10°F TD -20°F SST	6°C TD -29°C SST	No.	CFM	m³/h	Diameter		Extended (Std.)		Diffused (Opt.)		
	BTUH	Watts				in.	mm	ft.	m	ft.	m	
6 Fins Per Inch	BME101	<b>8,832</b>	2,590	1	<b>2,115</b>	3,600	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BME140	<b>12,236</b>	3,580	1	<b>2,025</b>	3,440	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BME190	<b>16,652</b>	4,880	2	<b>4,230</b>	7,190	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BME260	<b>22,724</b>	6,660	2	<b>4,050</b>	6,890	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BME310	<b>27,140</b>	7,950	3	<b>6,345</b>	10,790	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BME390	<b>34,132</b>	10,000	3	<b>6,075</b>	10,330	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BME430	<b>37,628</b>	11,020	4	<b>7,920</b>	13,460	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BME520	<b>45,448</b>	13,310	4	<b>7,560</b>	12,850	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BME620	<b>54,188</b>	15,870	5	<b>9,000</b>	15,300	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
4 Fins Per Inch	BML100	<b>8,740</b>	2,560	1	<b>2,093</b>	3,560	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BML165	<b>14,444</b>	4,230	2	<b>4,410</b>	7,500	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BML220	<b>19,228</b>	5,630	2	<b>4,185</b>	7,120	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BML250	<b>21,896</b>	6,410	3	<b>6,615</b>	11,250	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BML330	<b>28,888</b>	8,460	3	<b>6,278</b>	10,670	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BML370	<b>32,384</b>	9,490	4	<b>8,190</b>	13,920	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BML440	<b>38,456</b>	11,260	4	<b>7,830</b>	13,310	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BML530	<b>46,368</b>	13,580	5	<b>9,315</b>	15,840	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5

### Capacity Correction Factors For Electric and Hot Gas Defrost Units

Saturated Suction Temperature °F	+20	-10	-20	-30	-40
Saturated Suction Temperature °C	-7	-23	-29	-34	-40
Multiply Capacity By	1.15	1.02	1.00	0.90	0.80

\* Standard molded fan guards allow for extended air throw; optional wire guards promote air diffusion

† Air throw data based on 12-ft. high ceilings with no obstructions where velocity drops to 50 FPM

‡ For EC motors, use 60 Hz capacity and airflow values (Units with EC motors operating at 50 Hz will not see a reduction in performance due to the electronic control of the motor)

## Specifications

### Model BME/BML Electric Defrost | 60 Hz

Model	PSC Motor						EC Motor		Defrost Heater							
	HP*	208-230/1/60		460/1/60		575/1/60		208-230/1/60		Watts	208-230/1/60	208-230/3/60	460/1/60	460/3/60	575/3/60	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts		Total Amps					
6 Fins Per Inch	BME101	1/4	<b>1.8</b>	275	<b>1.0</b>	275	<b>0.7</b>	310	<b>1.4</b>	275	2,730	11.9	8.2	5.9	4.1	3.3
	BME140	1/4	<b>1.8</b>	275	<b>1.0</b>	275	<b>0.7</b>	310	<b>1.4</b>	275	2,730	11.9	8.2	5.9	4.1	3.3
	BME190	1/4	<b>3.6</b>	550	<b>2.0</b>	550	<b>1.4</b>	620	<b>2.8</b>	550	5,350	23.3	16.0	11.6	8.3	6.6
	BME260	1/4	<b>3.6</b>	550	<b>2.0</b>	550	<b>1.4</b>	620	<b>2.8</b>	550	5,350	23.3	16.0	11.6	8.3	6.6
	BME310	1/4	<b>5.4</b>	825	<b>3.0</b>	825	<b>2.1</b>	930	<b>4.2</b>	825	7,750	33.7	23.2	16.8	12.0	9.6
	BME390	1/4	<b>5.4</b>	825	<b>3.0</b>	825	<b>2.1</b>	930	<b>4.2</b>	825	7,750	33.7	23.2	16.8	12.0	9.6
	BME430	1/4	<b>7.2</b>	1,100	<b>4.0</b>	1,100	<b>2.8</b>	1,240	<b>5.6</b>	1,100	10,200	-	30.5	22.2	15.8	12.6
	BME520	1/4	<b>7.2</b>	1,100	<b>4.0</b>	1,100	<b>2.8</b>	1,240	<b>5.6</b>	1,100	10,200	-	30.5	22.2	15.8	12.6
	BME620	1/4	<b>9.0</b>	1,375	<b>5.0</b>	1,375	<b>3.5</b>	1,550	<b>7.0</b>	1,375	11,600	-	34.7	25.2	18.1	14.4
4 Fins Per Inch	BML100	1/4	<b>1.8</b>	275	<b>1.0</b>	275	<b>0.7</b>	310	<b>1.4</b>	275	2,730	11.9	8.2	5.9	4.1	3.3
	BML165	1/4	<b>3.6</b>	550	<b>2.0</b>	550	<b>1.4</b>	620	<b>2.8</b>	550	5,350	23.3	16.0	11.6	8.3	6.6
	BML220	1/4	<b>3.6</b>	550	<b>2.0</b>	550	<b>1.4</b>	620	<b>2.8</b>	550	5,350	23.3	16.0	11.6	8.3	6.6
	BML250	1/4	<b>5.4</b>	825	<b>3.0</b>	825	<b>2.1</b>	930	<b>4.2</b>	825	7,750	33.7	23.2	16.8	12.0	9.6
	BML330	1/4	<b>5.4</b>	825	<b>3.0</b>	825	<b>2.1</b>	930	<b>4.2</b>	825	7,750	33.7	23.2	16.8	12.0	9.6
	BML370	1/4	<b>7.2</b>	1,100	<b>4.0</b>	1,100	<b>2.8</b>	1,240	<b>5.6</b>	1,100	10,200	-	30.5	22.2	15.8	12.6
	BML440	1/4	<b>7.2</b>	1,100	<b>4.0</b>	1,100	<b>2.8</b>	1,240	<b>5.6</b>	1,100	10,200	-	30.5	22.2	15.8	12.6
	BML530	1/4	<b>9.0</b>	1,375	<b>5.0</b>	1,375	<b>3.5</b>	1,550	<b>7.0</b>	1,375	11,600	-	34.7	25.2	18.1	14.4

### Model BME/BML Electric Defrost | 50 Hz

Model	PSC Motor			EC Motor		Defrost Heater				
	HP	220/1/50		380/1/50		220/1/50		Watts	220/1/50	380/3/50
		Amps	Amps	Amps	Amps	Amps	Amps		Total Amps	
6 Fins Per Inch	BME101	1/4	1.8		1.0		1.4	2,510	11.4	3.4
	BME140	1/4	1.8		1.0		1.4	2,510	11.4	3.4
	BME190	1/4	3.6		2.0		2.8	4,910	22.3	6.9
	BME260	1/4	3.6		2.0		2.8	4,910	22.3	6.9
	BME310	1/4	5.4		3.0		4.2	7,090	32.2	9.9
	BME390	1/4	5.4		3.0		4.2	7,090	32.2	9.9
	BME430	1/4	7.2		4.0		5.6	9,340	-	13.1
	BME520	1/4	7.2		4.0		5.6	9,340	-	13.1
	BME620	1/4	9.0		5.0		7.0	10,620	-	15.0
4 Fins Per Inch	BML100	1/4	1.8		1.0		1.4	2,510	11.4	3.4
	BML165	1/4	3.6		2.0		2.8	4,910	22.3	6.9
	BML220	1/4	3.6		2.0		2.8	4,910	22.3	6.9
	BML250	1/4	5.4		3.0		4.2	7,090	32.2	9.9
	BML330	1/4	5.4		3.0		4.2	7,090	32.2	9.9
	BML370	1/4	7.2		4.0		5.6	9,340	-	13.1
	BML440	1/4	7.2		4.0		5.6	9,340	-	13.1
	BML530	1/4	9.0		5.0		7.0	10,620	-	15.0

\* 575/1/60 motors are 1/3 HP

## Performance Data

### Model BMG/BMF Hot Gas Defrost | 60 Hz

Model	Capacity		Fan Data		Air Throw*†							
	10°F TD -20°F SST	6°C TD -29°C SST	No.	CFM	m³/h	Diameter		Extended (Std.)		Diffused (Opt.)		
	BTUH	Watts				in.	mm	ft.	m	ft.	m	
<b>6 Fins Per Inch</b>	BMG190	<b>19,000</b>	5,570	2	<b>4,700</b>	7,990	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BMG260	<b>26,000</b>	7,620	2	<b>4,500</b>	7,650	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BMG310	<b>31,000</b>	9,080	3	<b>7,050</b>	11,990	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BMG390	<b>39,000</b>	11,420	3	<b>6,750</b>	11,480	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BMG430	<b>43,000</b>	12,590	4	<b>8,800</b>	14,960	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BMG520	<b>52,000</b>	15,230	4	<b>8,400</b>	14,280	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
<b>4 Fins Per Inch</b>	BMF165	<b>16,500</b>	4,830	2	<b>4,900</b>	8,330	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BMF220	<b>22,000</b>	6,440	2	<b>4,650</b>	7,910	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BMF250	<b>25,000</b>	7,320	3	<b>7,350</b>	12,500	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BMF330	<b>33,000</b>	9,670	3	<b>6,975</b>	11,860	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BMF370	<b>37,000</b>	10,840	4	<b>9,100</b>	15,470	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15
	BMF440	<b>44,000</b>	12,890	4	<b>8,700</b>	14,790	<b>18</b>	457	<b>65</b>	20	<b>50</b>	15

### Capacity Correction Factors For Electric and Hot Gas Defrost Units

Saturated Suction Temperature °F	+20	-10	-20	-30	-40
Saturated Suction Temperature °C	-7	-23	-29	-34	-40
Multiply Capacity By	1.15	1.02	1.00	0.90	0.80

### Model BMG/BMF Hot Gas Defrost | 50 Hz‡

Model	Capacity		Fan Data		Air Throw*†							
	10°F TD -20°F SST	6°C TD -29°C SST	No.	CFM	m³/h	Diameter		Extended (Std.)		Diffused (Opt.)		
	BTUH	Watts				in.	mm	ft.	m	ft.	m	
<b>6 Fins Per Inch</b>	BMG190	<b>16,652</b>	4,880	2	<b>4,230</b>	7,190	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BMG260	<b>22,724</b>	6,660	2	<b>4,050</b>	6,890	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BMG310	<b>27,140</b>	7,950	3	<b>6,345</b>	10,790	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BMG390	<b>34,132</b>	10,000	3	<b>6,075</b>	10,330	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BMG430	<b>37,628</b>	11,020	4	<b>7,920</b>	13,460	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BMG520	<b>45,448</b>	13,310	4	<b>7,560</b>	12,850	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
<b>4 Fins Per Inch</b>	BMF165	<b>14,444</b>	4,230	2	<b>4,410</b>	7,500	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BMF220	<b>19,228</b>	5,630	2	<b>4,185</b>	7,120	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BMF250	<b>21,896</b>	6,410	3	<b>6,615</b>	11,250	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BMF330	<b>28,888</b>	8,460	3	<b>6,278</b>	10,670	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BMF370	<b>32,384</b>	9,490	4	<b>8,190</b>	13,920	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5
	BMF440	<b>38,456</b>	11,260	4	<b>7,830</b>	13,310	<b>18</b>	457	<b>60</b>	18.5	<b>45</b>	13.5

\* Standard molded fan guards allow for extended air throw; optional wire guards promote air diffusion

† Air throw data based on 12-ft. high ceilings with no obstructions where velocity drops to 50 FPM

‡ For EC motors, use 60 Hz capacity and airflow values (Units with EC motors operating at 50 Hz will not see a reduction in performance due to the electronic control of the motor)

## Specifications

### Model BMG/BMF Hot Gas Defrost | 60 Hz

Model		PSC Motor								EC Motor				Drain Pan Heater (Std.)					
		HP*	115/1/60		208-230/1/60		460/1/60		575/1/60		115/1/60		208-230/1/60		Watts	115/1/60	208-230/1/60	460/1/60	575/1/60
			Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts		Total Amps			
6 Fins Per Inch	BMG190	1/4	<b>8.0</b>	550	<b>3.6</b>	550	<b>2.0</b>	550	<b>1.4</b>	620	<b>5.6</b>	420	<b>2.8</b>	410	950	8.3	4.1	2.1	1.7
	BMG260	1/4	<b>8.0</b>	550	<b>3.6</b>	550	<b>2.0</b>	550	<b>1.4</b>	620	<b>5.6</b>	420	<b>2.8</b>	410	950	8.3	4.1	2.1	1.7
	BMG310	1/4	<b>12.0</b>	825	<b>5.4</b>	825	<b>3.0</b>	825	<b>2.1</b>	930	<b>8.4</b>	630	<b>4.2</b>	615	1,350	11.7	5.9	2.9	2.3
	BMG390	1/4	<b>12.0</b>	825	<b>5.4</b>	825	<b>3.0</b>	825	<b>2.1</b>	930	<b>8.4</b>	630	<b>4.2</b>	615	1,350	11.7	5.9	2.9	2.3
	BMG430	1/4	<b>16.0</b>	1,100	<b>7.2</b>	1,100	<b>4.0</b>	1,100	<b>2.8</b>	1,240	<b>11.2</b>	840	<b>5.6</b>	820	1,800	15.7	7.8	3.9	3.1
	BMG520	1/4	<b>16.0</b>	1,100	<b>7.2</b>	1,100	<b>4.0</b>	1,100	<b>2.8</b>	1,240	<b>11.2</b>	840	<b>5.6</b>	820	1,800	15.7	7.8	3.9	3.1
4 Fins Per Inch	BMF165	1/4	<b>8.0</b>	550	<b>3.6</b>	550	<b>2.0</b>	550	<b>1.4</b>	620	<b>5.6</b>	420	<b>2.8</b>	410	950	8.3	4.1	2.1	1.7
	BMF220	1/4	<b>8.0</b>	550	<b>3.6</b>	550	<b>2.0</b>	550	<b>1.4</b>	620	<b>5.6</b>	420	<b>2.8</b>	410	950	8.3	4.1	2.1	1.7
	BMF250	1/4	<b>12.0</b>	825	<b>5.4</b>	825	<b>3.0</b>	825	<b>2.1</b>	930	<b>8.4</b>	630	<b>4.2</b>	615	1,350	11.7	5.9	2.9	2.3
	BMF330	1/4	<b>12.0</b>	825	<b>5.4</b>	825	<b>3.0</b>	825	<b>2.1</b>	930	<b>8.4</b>	630	<b>4.2</b>	615	1,350	11.7	5.9	2.9	2.3
	BMF370	1/4	<b>16.0</b>	1,100	<b>7.2</b>	1,100	<b>4.0</b>	1,100	<b>2.8</b>	1,240	<b>11.2</b>	840	<b>5.6</b>	820	1,800	15.7	7.8	3.9	3.1
	BMF440	1/4	<b>16.0</b>	1,100	<b>7.2</b>	1,100	<b>4.0</b>	1,100	<b>2.8</b>	1,240	<b>11.2</b>	840	<b>5.6</b>	820	1,800	15.7	7.8	3.9	3.1

### Model BMG/BMF Hot Gas Defrost | 50 Hz

Model		PSC Motor			EC Motor	Drain Pan Heater (Std.)		
		HP	220/1/50	380/1/50	220/1/50	Watts	220/1/50	380/1/50
			Amps	Amps	Amps		Total Amps	
6 Fins Per Inch	BMG190	1/4	3.6	2.0	2.8	860	3.9	1.7
	BMG260	1/4	3.6	2.0	2.8	860	3.9	1.7
	BMG310	1/4	5.4	3.0	4.2	1,230	5.6	2.4
	BMG390	1/4	5.4	3.0	4.2	1,230	5.6	2.4
	BMG430	1/4	7.2	4.0	5.6	1,650	7.5	3.2
	BMG520	1/4	7.2	4.0	5.6	1,650	7.5	3.2
4 Fins Per Inch	BMF165	1/4	3.6	2.0	2.8	860	3.9	1.7
	BMF220	1/4	3.6	2.0	2.8	860	3.9	1.7
	BMF250	1/4	5.4	3.0	4.2	1,230	5.6	2.4
	BMF330	1/4	5.4	3.0	4.2	1,230	5.6	2.4
	BMF370	1/4	7.2	4.0	5.6	1,650	7.5	3.2
	BMF440	1/4	7.2	4.0	5.6	1,650	7.5	3.2

\* 575/1/60 motors are 1/3 HP

## Physical Data

### Model BMA Air Defrost

Model	No. of Fans	Connections (in.)				Approx. Net Weight	
		Coil Inlet ODF	Suction ODF	External Equalizer ODF	Drain FPT	Ibs.	kg
BMA130	1	1/2	7/8	1/4	3/4	<b>115</b>	52
BMA155	1	1/2	1-1/8	1/4	3/4	<b>123</b>	56
BMA245	2	7/8	1-1/8	1/4	3/4	<b>134</b>	61
BMA300	2	7/8	1-1/8	1/4	3/4	<b>148</b>	67
BMA365	3	7/8	1-3/8	1/4	3/4	<b>200</b>	91
BMA450	3	1-1/8*	1-3/8	1/4	3/4	<b>227</b>	103
BMA510	4	1-1/8*	1-5/8	1/4	3/4	<b>230</b>	104
BMA600	4	1-1/8*	1-5/8	1/4	3/4	<b>255</b>	116
BMA710	5	1-1/8*	1-5/8	1/4	3/4	<b>285</b>	129

\* Supplied with adapter to 7/8 ODF

### Model BME/BML Electric Defrost

Model	No. of Fans	Connections (in.)				Approx. Net Weight		
		Coil Inlet ODF	Suction ODF	External Equalizer ODF	Drain FPT	Ibs.	kg	
<b>6 Fins Per Inch</b>	BME101	1	1/2	7/8	1/4	3/4	<b>118</b>	54
	BME140	1	1/2	7/8	1/4	3/4	<b>126</b>	57
	BME190	2	7/8	1-1/8	1/4	3/4	<b>138</b>	63
	BME260	2	1-1/8*	1-3/8	1/4	3/4	<b>153</b>	69
	BME310	3	1-1/8*	1-3/8	1/4	3/4	<b>210</b>	95
	BME390	3	1-1/8*	1-3/8	1/4	3/4	<b>237</b>	108
	BME430	4	1-1/8*	1-5/8	1/4	3/4	<b>267</b>	121
	BME520	4	1-1/8*	1-5/8	1/4	3/4	<b>300</b>	136
	BME620	5	1-1/8*	1-5/8	1/4	3/4	<b>338</b>	153
<b>4 Fins Per Inch</b>	BML100	1	1/2	7/8	1/4	3/4	<b>125</b>	56
	BML165	2	7/8	1-1/8	1/4	3/4	<b>136</b>	62
	BML220	2	1-1/8*	1-3/8	1/4	3/4	<b>151</b>	68
	BML250	3	1-1/8*	1-3/8	1/4	3/4	<b>207</b>	94
	BML330	3	1-1/8*	1-3/8	1/4	3/4	<b>234</b>	106
	BML370	4	1-1/8*	1-5/8	1/4	3/4	<b>262</b>	119
	BML440	4	1-1/8*	1-5/8	1/4	3/4	<b>295</b>	134
	BML530	5	1-1/8*	1-5/8	1/4	3/4	<b>332</b>	151

\* Supplied with adapter to 7/8 ODF

## Physical Data

### Model BMG/BMF Hot Gas Defrost

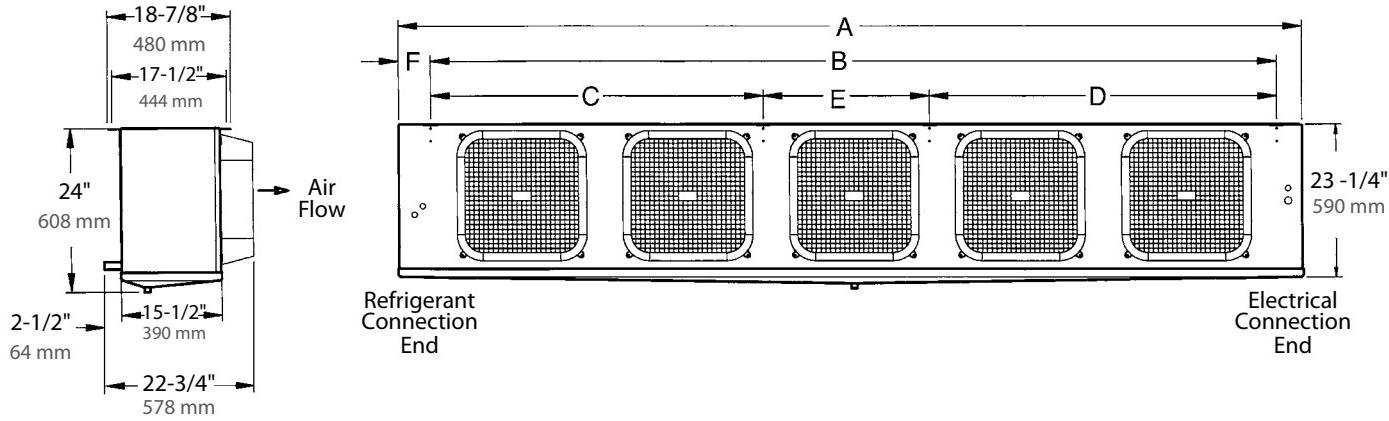
Model	No. of Fans	Connections (in.)						Approx. Net Weight		
		Coil Inlet ODF	Suction ODF	External Equalizer ODF	Drain FPT	Side Port ODF	Hot Gas Pan Conns.** ODF	Ibs.	kg	
6 Fins Per Inch	BMG190	2	1-1/8*	1-1/8	1/4	3/4	5/8	7/8	175	79
	BMG260	2	1-1/8*	1-3/8	1/4	3/4	5/8	7/8	190	86
	BMG310	3	1-1/8*	1-3/8	1/4	3/4	5/8	7/8	210	95
	BMG390	3	1-1/8*	1-3/8	1/4	3/4	5/8	7/8	237	108
	BMG430	4	1-1/8*	1-5/8	1/4	3/4	5/8	7/8	267	121
	BMG520	4	1-1/8*	1-5/8	1/4	3/4	5/8	7/8	300	136
4 Fins Per Inch	BMF165	2	1-1/8*	1-1/8	1/4	3/4	5/8	7/8	173	78
	BMF220	2	1-1/8*	1-3/8	1/4	3/4	5/8	7/8	188	85
	BMF250	3	1-1/8*	1-3/8	1/4	3/4	5/8	7/8	207	94
	BMF330	3	1-1/8*	1-3/8	1/4	3/4	5/8	7/8	234	106
	BMF370	4	1-1/8*	1-5/8	1/4	3/4	5/8	7/8	262	119
	BMF440	4	1-1/8*	1-5/8	1/4	3/4	5/8	7/8	295	134

\* Supplied with adapter to 7/8 ODF

\*\* Supplied with electric drain pan heater as standard, hot gas pan is optional

## Dimensional Data

### All Models Dimensions



### All Models Dimensional Data

Model	6 FPI Models		4 FPI Models		Dimensions											
	Defrosts		Defrosts		A		B		C		D		E		F	
	Elec.	Hot Gas	Elec.	Hot Gas	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
BMA130	BME101	-	-	-	<b>39-5/16</b>	1,000	<b>30-1/4</b>	770	-	-	-	-	-	-	<b>4-15/16</b>	125
BMA155	BME140	-	BML100	-	<b>39-5/16</b>	1,000	<b>30-1/4</b>	770	-	-	-	-	-	-	<b>4-15/16</b>	125
BMA245	BME190	BMG190	BML165	BMF165	<b>67-5/16</b>	1,710	<b>58-1/4</b>	1,480	-	-	-	-	-	-	<b>4-15/16</b>	125
BMA300	BME260	BMG260	BML220	BMF220	<b>67-5/16</b>	1,710	<b>58-1/4</b>	1,480	-	-	-	-	-	-	<b>4-15/16</b>	125
BMA365	BME310	BMG310	BML250	BMF250	<b>95-5/16</b>	2,420	<b>86-1/4</b>	2,190	-	-	-	-	-	-	<b>4-15/16</b>	125
BMA450	BME390	BMG390	BML330	BMF330	<b>95-5/16</b>	2,420	<b>86-1/4</b>	2,190	-	-	-	-	-	-	<b>4-15/16</b>	125
BMA510	BME430	BMG430	BML370	BMF370	<b>123-5/16</b>	3,130	<b>114-1/4</b>	2,900	<b>56</b>	1,420	<b>58-1/4</b>	1,480	-	-	<b>4-15/16</b>	125
BMA600	BME520	BMG520	BML440	BMF440	<b>123-5/16</b>	3,130	<b>114-1/4</b>	2,900	<b>56</b>	1,420	<b>58-1/4</b>	1,480	-	-	<b>4-15/16</b>	125
BMA710	BME620	-	BML530	-	<b>138-13/16</b>	3,530	<b>129-3/4</b>	3,300	<b>51</b>	1,300	<b>53-1/4</b>	1,350	<b>25-1/2</b>	650	<b>4-15/16</b>	125

**NOTE:** Evaporator mounting brackets accept up to 1/2" hanger rod

# Replacement Parts



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## Motor/Fan/Blade/Guards

Part #	Description
5020-S	Motor 115V
5020-T	Motor 208-230V
4567-T	Motor 208-230V Totally Enclosed
25302201	Motor 460V
25304601*	Motor 460V Low Temp Totally Enclosed
25308101*	Motor 208-230V Low Temp Totally Enclosed
5599-M	Run Capacitor (5 MFD) - Used with most PSC Motors
5779-G	Run Capacitor (7.5 MFD) - Used with 25304601 Motor Only
22511601	Run Capacitor (7.5 MFD) - Used with 25399301
25399301	Motor 575V
5064-E	Motor Mount
5130-C	Fan Blade
4339-X	Fan Guard Molded with Logo
5063-E	Fan Guard Beige Wire

\*Special motors to be used in room ambients -31°F to -50°F

## Cabinet Components

Part #	Description	No. of Fans
40491902	Drain Pan*	1
40492102	Drain Pan*	2
40492302	Drain Pan*	3
40492502	Drain Pan*	4
40492702	Drain Pan*	5
40830101	Header Side Panel	1-5
40830201	Electrical Side Panel	1-5
40830901	Header Connection Panel	1-5
92864003	Drain Fitting	1-5

\* Includes provision to mount drain pan heater

## Electrical Components

Part #	Description
2891040	Room Thermostat
5709-L	Defrost Term. / Fan Delay Thermostat Sealed Bimetal Type
2890109	Defrost Term. / Fan Delay Thermostat Adjustable Type
5708-L	Heater Limit Thermostat

**NOTE:** Contact factory for hot gas defrost components not listed

## Drain Pan Defrost Heater (1 per unit)

Part #	Description	Voltage	Color Code
24710301	1 Fan Unit, 530W	208-230V	Black
24710302	2 Fan Unit, 950W	208-230V	Black
24710303	3 Fan Unit, 1350W	208-230V	Black
24710304	4 Fan Unit, 1800W	208-230V	Black
24710305	5 Fan Unit, 2000W	208-230V	Black
24710401	1 Fan Unit, 530W	460V	Red
24710402	2 Fan Unit, 950W	460V	Red
24710403	3 Fan Unit, 1350W	460V	Red
24710404	4 Fan Unit, 1800W	460V	Red
24710405	5 Fan Unit, 2000W	460V	Red
24710502	2 Fan Unit, 950W	115V	Black, White
24710503	3 Fan Unit, 1350W	115V	Black, White
24710504	4 Fan Unit, 1800W	115V	Black, White
24710901	1 Fan Unit, 530W	575V	Black, Red
24710902	2 Fan Unit, 950W	575V	Black, Red
24710903	3 Fan Unit, 1350W	575V	Black, Red
24710904	4 Fan Unit, 1800W	575V	Black, Red
24710905	5 Fan Unit, 2000W	575V	Black, Red

## Coil Defrost Heaters (4 per unit)

Part #	Description	Voltage
24710201	1 Fan Unit, 550W	230-460V
24710202	2 Fan Unit, 1100W	230-460V
24710203	3 Fan Unit, 1600W	230-460V
24710204	4 Fan Unit, 2100W	230-460V
24710205	5 Fan Unit, 2400W	230-460V
24711101	1 Fan Unit, 550W	575V
24711102	2 Fan Unit, 1100W	575V
24711103	3 Fan Unit, 1600W	575V
24711104	4 Fan Unit, 2100W	575V
24711105	5 Fan Unit, 2400W	575V
23308001	Heater Clip (1-3 fans)	-
23308101	Heater Clip (4-5 fans)	-

## Nozzle Selection

### Model BMA Air Defrost

Model	No. of Fans	Distributor Tube (in.)		No. of Circuits	R-404A* Nozzle	R-22 Nozzle
		OD	Length			
BMA130	1	3/16	21-1/2	3	L-1	L-3/4
BMA155	1	3/16	21-1/2	5	L-1	L-3/4
BMA245	2	3/16	21-1/2	9	G-2-1/2	G-1-1/2
BMA300	2	3/16	21-1/2	9	G-2-1/2	G-1-1/2
BMA365	3	3/16	21-1/2	9	G-3	G-2
BMA450	3	3/16	21-1/2	12	E-4	E-2-1/2
BMA510	4	3/16	21-1/2	13	E-5	E-3
BMA600	4	3/16	21-1/2	18	E-5	E-3
BMA710	5	3/16	21-1/2	18	E-6	E-4

### Model BME/BML Electric Defrost

Model	No. of Fans	Distributor Tube (in.)		No. of Circuits	R-404A* Nozzle	R-22 Nozzle
		OD	Length			
6 Fins Per Inch	BME101	1	3/16	21-1/2	5	L-1-1/2
	BME140	1	3/16	21-1/2	6	L-1-1/2
	BME190	2	3/16	21-1/2	9	G-2-1/2
	BME260	2	3/16	21-1/2	12	E-3
	BME310	3	3/16	21-1/2	13	E-4
	BME390	3	3/16	21-1/2	18	E-5
	BME430	4	3/16	21-1/2	12	E-5
	BME520	4	3/16	21-1/2	17	E-6
	BME620	5	3/16	21-1/2	17	E-8
4 Fins Per Inch	BML100	1	3/16	21-1/2	6	L-1-1/2
	BML165	2	3/16	21-1/2	9	G-2-1/2
	BML220	2	3/16	21-1/2	12	E-3
	BML250	3	3/16	21-1/2	13	E-4
	BML330	3	3/16	21-1/2	18	E-5
	BML370	4	3/16	21-1/2	12	E-5
	BML440	4	3/16	21-1/2	17	E-6
	BML530	5	3/16	21-1/2	17	E-8

### Model BMG/BMF Hot Gas Defrost

Model	No. of Fans	Distributor Tube (in.)		No. of Circuits	R-404A* Nozzle	R-22 Nozzle
		OD	Length			
6 Fins Per Inch	BMG190	2	1/4	21-1/2	9	E-3
	BMG260	2	1/4	21-1/2	12	E-4
	BMG310	3	3/16	21-1/2	13	E-4
	BMG390	3	3/16	21-1/2	18	E-5
	BMG430	4	3/16	21-1/2	13	E-5
	BMG520	4	3/16	21-1/2	18	E-6
4 Fins Per Inch	BMF165	2	1/4	21-1/2	9	E-3
	BMF220	2	1/4	21-1/2	12	E-4
	BMF250	3	3/16	21-1/2	13	E-4
	BMF330	3	3/16	21-1/2	18	E-5
	BMF370	4	3/16	21-1/2	13	E-5
	BMF440	4	3/16	21-1/2	18	E-6

\*Also suitable for R-507, R-502, R-134A, R-401A, R-402A

Nozzles sized for 90° - 100°F liquid temp. at expansion valve. Refer to manual H-IM-64 if liquid temp. is not 90° - 100°F

Consult Bohn Application Engineering if evaporator TD is not 10° - 15°F, (room temp. - saturated suction temp.)

**Caution: Refrigeration system will not perform properly without Correct Nozzle!**

## Notes



For more information on Bohn refrigeration products, contact  
your Sales Representative or visit us at [www.thecoldstandard.com](http://www.thecoldstandard.com).



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*Since product improvement is a continuing effort, we reserve the right to  
make changes in specifications without notice.*